

# Executive Summary

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## Introduction to the One Water One Watershed Plan

The Santa Ana Watershed Integrated Regional Water Management Plan (IRWMP) is known by stakeholders in the Watershed as the “One Water One Watershed” (OWOW) Plan, a name that originates in the plan’s comprehensive view of the Watershed and water issues: an integral view encompassing all sub-regions, political jurisdictions, water agencies and non-governmental stakeholders (private sector, environmental groups, and the public at large) in the watershed; and one in which all types of water (imported, local surface and groundwater, stormwater, and wastewater effluent) are viewed as components of a *single* water resource, inextricably linked to land use and habitat, and that tries to limit impacts to natural hydrology.

The OWOW Plan was developed by a diverse group of stakeholders led by a Steering Committee composed of public officials from counties and cities in the watershed, representatives from the environmental, regulatory and business communities, and representatives from the Santa Ana Watershed Authority (SAWPA). The Steering Committee was supported by technical experts grouped into 10 disciplines (known as Pillars), ranging from water supply and quality, to climate change, to environmental justice.

The Santa Ana Watershed Project Authority (SAWPA) acted as the Regional Water Management Group (RWMG) for the process, and while SAWPA facilitated the planning process and provided technical input and support through its staff and consultants, the development of the goals and strategies of the Plan, as well as the decision making process were done by the Steering Committee with the support of the Pillars and with consideration to comments from the public at large.

The collaborative, transparent, and watershed-wide view embraced by the OWOW planning process from the onset, builds upon previous planning efforts in the watershed, such as the 2005 Santa Ana Integrated Watershed Plan, and is an attempt to change the way in which water and other environmental resources are managed in the watershed, moving from reliance on large centralized infrastructure projects to a systems approach that complements existing centralized infrastructure with decentralized facilities (e.g. groundwater desalination), technology, natural infrastructure, and human capital.

## OWOW Vision and Mission

The vision of the OWOW Plan is:

1. A Watershed that is sustainable, drought-proofed and salt-balanced by 2030, and in which water resources are protected and water is used efficiently
2. A Watershed that supports economic and environmental viability
3. A Watershed that is adaptable to climate change
4. A Watershed in which environmental justice deficiencies are corrected
5. A Watershed in which interruptions to natural hydrology are minimized
6. A new water ethic is created at the institutional and personal level

The Mission of the OWOW Plan is to create opportunities for collaboration to find sustainable watershed-wide solutions among diverse stakeholders from throughout the Watershed. The Plan will also provide a blueprint for water resources management in the Watershed for the next 30 years.

To achieve this vision and mission, stakeholders must address four major crises or threats which we have characterized as the Four Horsemen of the Apocalypse: 1) Climate Change resulting in reduced water supplies combined with increased water needs in the region; 2) Colorado River Drought Conditions resulting in reductions of imported supply due to upper basin entitlements and continued long-term drought; 3) San Joaquin-Bay Delta Vulnerability resulting in loss of supply due to catastrophic levee failure or changing management practices of the Delta; 4) Population Growth and Development resulting in interruptions in hydrology and groundwater recharge while increasing water needs.

## Principles for Watershed Planning

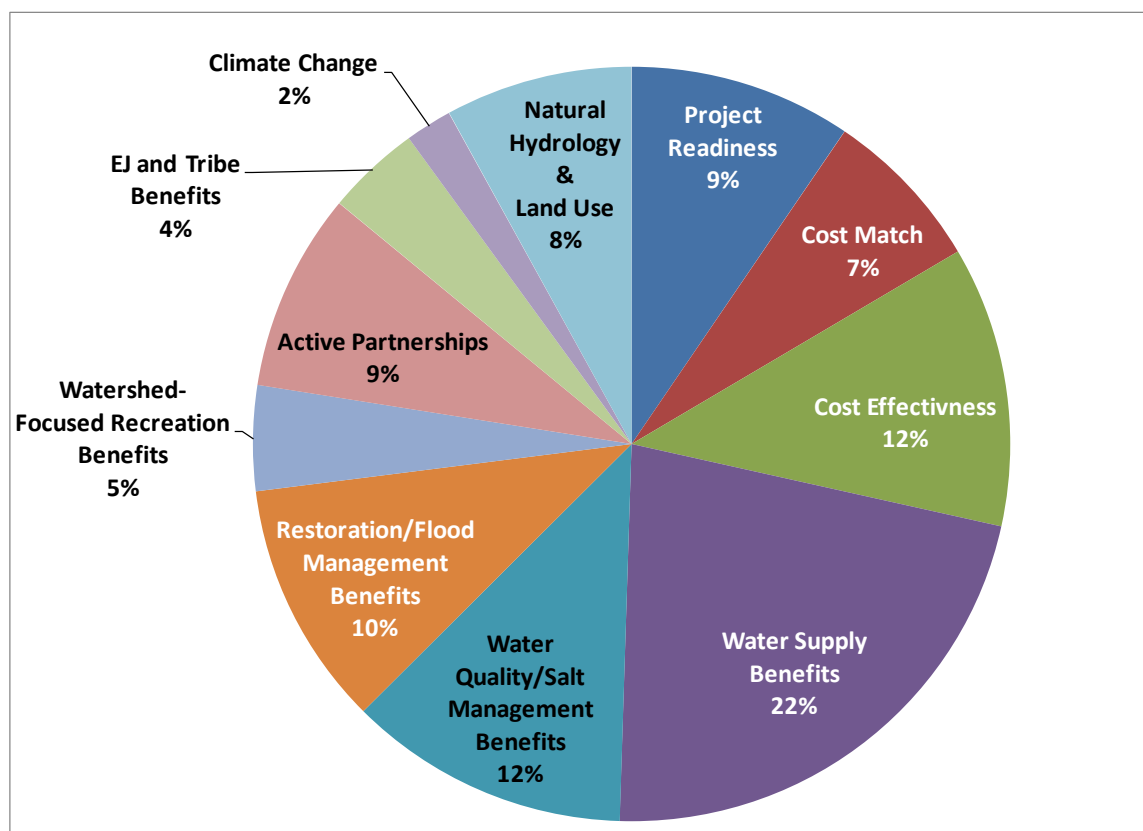
Several principles were applied during the development of the OWOW Plan:

- The planning process must be watershed-wide and bottom-up in order to allow for a holistic and systematic approach to watershed management
- It is necessary to involve stakeholders representing counties, cities and water districts, as well as the private sector and the regulatory, environmental and environmental justice communities. The active participation of this diverse group of stakeholders integrates the different interests in the Watershed beyond political boundaries
- The OWOW Plan and the projects included therein must pursue multiple objectives beyond the “traditional” objective of providing reliable water, and include ensuring reliable water supply, ensuring high quality water for all users, preserving and enhancing the environment, promoting sustainable water solutions, managing rainfall as a resource, preserving open-space and recreational opportunities, maintaining quality of life (including addressing the needs of disadvantaged communities), providing economically effective solutions, and improving regional integration and coordination
- The OWOW Plan must advance a paradigm change from water *supply* to an integral water *management* mentality: moving from a mission of providing abundant high-quality water at the lowest cost possible, to one in which water resources are managed in a sustainable manner and with regard for the needs of the environment
- Watershed-wide planning must transcend specific funding opportunities (e.g. State grants)
- The implementation of the Plan must result in agreements among the Watershed stakeholders on how to manage and operate the watershed
- The Plan must improve life conditions throughout the Watershed, ensuring that an improvement in the welfare of one area is not at the expense of others

## Objectives and Targets of the OWOW Plan

In order to achieve the Watershed's vision, the Steering Committee and the Pillar Groups participated in numerous meetings and workshops aimed at developing and adopting specific objectives, targets, and high-level strategies for the watershed. **Figure 1** presents the objectives and their relative importance, as determined by the Steering Committee for the first round of IRWMP funding. As this plan is intended to be a tool in an iterative planning process, it is expected that the Steering Committee will reconsider the objectives and associated rankings to reflect changing conditions. Sub-objectives were established for each objective to increase clarity and granularity.

**Figure 1** Objectives of the OWOW Plan



Using the objectives as overarching guiding principles, the Steering Committee then developed a number of high-level strategies, which include:

<ul style="list-style-type: none"> <li>• Increased storage</li> </ul>	<ul style="list-style-type: none"> <li>• Maximizing preservation and use of native plants</li> </ul>
<ul style="list-style-type: none"> <li>• Reduced demand</li> </ul>	<ul style="list-style-type: none"> <li>• Developing risk-based water quality improvements</li> </ul>
<ul style="list-style-type: none"> <li>• Groundwater desalination</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporating integrated water planning in General Plans</li> </ul>
<ul style="list-style-type: none"> <li>• Water recycling</li> </ul>	<ul style="list-style-type: none"> <li>• Managing public property for more than one use</li> </ul>
<ul style="list-style-type: none"> <li>• Consideration of stormwater as a water supply</li> </ul>	<ul style="list-style-type: none"> <li>• Creating watershed governance</li> </ul>
<ul style="list-style-type: none"> <li>• Valuing water differently</li> </ul>	<ul style="list-style-type: none"> <li>• Implementing watershed-wide education programs</li> </ul>

Furthermore, the Pillar Groups developed, based on their technical expertise, 13 specific quantifiable targets that allow measuring the extent to which the plan objectives are being met, including:

1. Recycle and reuse 100% of the wastewater in the watershed
2. Store water to account for half of watershed demand for 3 years
3. Reuse all of Santa Ana River flow at least once
4. Reduce potable water use by 20% by 2020
5. Capture and recharge 80% of rainfall
6. Fill gaps in riparian corridors to provide wetlands and linkages between open space and natural habitat
7. Meet California FloodSAFE goals and construct soft bottom flood systems
8. Meet water quality standards
9. Remove salt from watershed to improve salt balance
10. Complete the SAR Trail and connect all tributary corridors to it
11. Assure adequate water supply and safe wastewater treatment and disposal
12. Reduce greenhouse gas emissions from water management activities
13. Increase resource efficient land use

## Benefits of the OWOW Plan

Benefits resulting from the implementation of the OWOW Plan, and from the planning process itself, will materialize at different time horizons and will have very different characteristics. While some specific projects will be operational within a couple of years, other more ambitious projects, such as those requiring significant investment, technological development, or new mindsets and behaviors, could take years or decades to be fully realized. Similarly, some *hard* projects will

provide immediate tangible benefits (e.g. a new groundwater desalination facility), while *softer* projects will result in *less tangible* benefits in a longer timeframe, such as creating a new water ethic among water purveyor and users or changing our land use patterns.

*Soft* benefits of the Plan include:

- The adoption of a single set of values, goals, targets and high-level strategies for the watershed as a whole that provide a blueprint for water resources development over the next 20-30 years, developed with the input and buy-in of people from all corners of the watershed representing diverse and oftentimes competing interests
- A list of prioritized multi-benefit projects – projects that provide benefits to more than one user or sub-region of the watershed and that address more than one environmental resource
- A vision for the watershed future that transcends specific funding opportunities for local projects and integrates multiple interest (e.g. economic growth vs. environmental protection)

*Hard* benefits of the Plan upon implementation include, among other:

- Increased and more reliable water supplies
- Improved water quality
- Enhance habitat
- Increased and enhance recreational opportunities
- Green house gas emissions mitigation

## **OWOW Planning Process**

SAWPA officially launched the IRWMP planning effort during a meeting on April 17, 2007, in which 178 officials representing more than 100 agencies in Riverside, San Bernardino and Orange counties met to discuss the framework for the OWOW Plan, a shared vision of the Watershed. From the very beginning, the process has been opened to, and has received the participation of representatives from all geographic regions and political jurisdictions within the watershed, and from diverse representatives of different sectors of the community (governments, water agencies, development and environmental community, and the public at large).

The OWOW process was led by a Steering Committee composed of public officials from counties and cities in the Watershed, representatives from the environmental, regulatory and business communities, and representatives from the Santa Ana Watershed Authority (SAWPA).

The Steering Committee was supported by numerous technical experts grouped into 10 disciplines (known as Pillars), ranging from water supply and quality, to climate change, to environmental justice. Participants from numerous agencies and organizations have volunteered to serve on the Pillar groups and committees and have addressed every aspect of water management planning. Participants integrated water supply with environmental needs, and included the environmental justice and disadvantaged communities in integrated water solutions.

SAWPA acted as the Regional Water Management Group (RWMG) for the process, and while SAWPA facilitated the planning process and provided technical input and support through its staff and consultants, the development of the goals and strategies of the Plan and the decision making process were done by the Steering Committee with the support of the Pillars and with consideration to comments from the public at large.

The OWOW planning process was intended to be problem-focused with the goal of developing linkages across the region's varied geography and across the numerous disciplines that have an interest in water. Rather than focus on projects first, the Steering Committee suggested a planning process that focuses on the value of water to the region, then on how that water is managed, and finally, on the identification of specific projects. The process identified three broad areas where action is needed: the development of a water ethic that values water differently; a more collaborative approach to water management; and the construction of sustainable water infrastructure.

The fundamental concept for this planning process was to pull parties together in every aspect of the water arena – those who provide water, those who use it, and those who manage it – in a way that has never been done before, and in a way that goes beyond the interests of any one agency. This approach marked a major shift from previous IRWM planning efforts by greatly expanding the number and type of agencies and organizations involved in the process.

In developing the OWOW Plan, a decided “bottom up” approach for governance was envisioned. Unlike in previous SAWPA plans or other planning approaches across the State, every effort has been made to allow the key discussions of major water resource issues, concerns, problems, goals and objectives and potential solutions to originate and be first fully vetted at the stakeholder level. By expanding the involvement and collaboration to the *on-the-ground* level, greater buy-in and support was realized for this planning development process.

## Pillar Groups

In order to manage the initial planning work, the stakeholders were organized into ten separate workgroups or *pillars* centered around the following water resource management areas.

1. Water Supply Reliability	2. Flood Risk Management
3. Water Quality Improvement	4. Environment and Habitat Enhancement
5. Water Recycling	6. Parks, Recreation, and Open Space
7. Water Use Efficiency	8. Climate Change
9. Water and Land Use	10. Environmental Justice

The pillars consisted of approximately 10 to 60 volunteers, depending on the topic and interest level, and included participants from local agencies, special districts, non-profit organizations, university officials, Native American tribes, and private citizens, led by a volunteer chair having expertise in that specific water resource area.

The pillars were tasked with the definition of the Watershed problems for their respective discipline and in the identification and development of potential solutions and strategies. While pillars were asked to focus on one specific discipline based on their technical expertise, they were also asked to step out of their role and view problems from the other pillars' perspectives. It was through this process that new synergies were developed and multi-benefit programs were formed.

## Steering Committee

The next level of governance up from the foundation of the pillars was the OWOW Steering Committee, which consisted of ten representatives from across the Santa Ana River Watershed. The Committee was convened by the SAWPA Commission, and included two representatives from the SAWPA Commission representing water agencies, who serve as Convener and Vice-Convener; three County Supervisors - one from each county; three mayors - from large cities in each county; a business representative from the development community and; a representative from the environmental community.

The Steering Committee's role was to serve as the developer of plan goals and objectives for the Watershed, and to act as the oversight body that performs strategic decision making, crafts and adopts programmatic suites of project recommendations, and provides program advocacy necessary to optimize water resource protection for all.

## Resource Management Strategies

The OWOW plan encourages the development of projects that:

Provide watershed-wide benefits, over local projects that create problems elsewhere;

- Develop Multi-benefit projects; rather than more inefficient costly single purpose projects;
- Integrate all types of water (imported, local surface, local ground, stormwater, effluent) in a more comprehensive water management view;
- Integrate multiple interests (e.g. economic growth vs environmental protection), rather than focus on conflict and litigation;
- Avoid and/or reverse impacts to natural hydrology, and;
- Reduce harm to others; rather than push project and environmental costs onto other communities.



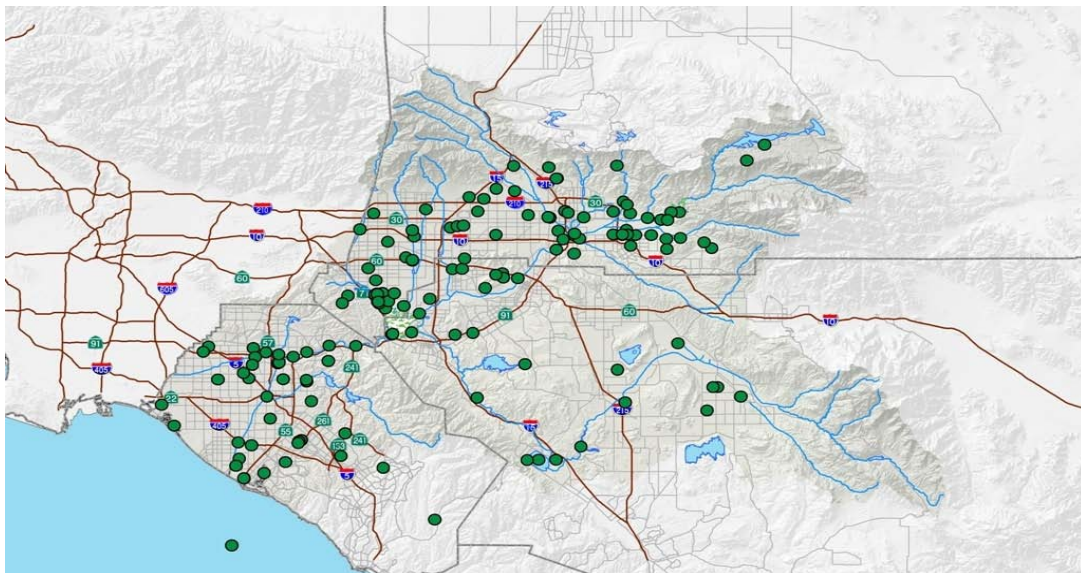
## Projects Included in the Plan

SAWPA issued an initial call for projects to be included on the OWOW Plan from any public agency or non-profit organization in the Watershed. The period for the preparation of project application was from May 17 to June 30, 2010. During this initial call for projects, project applications were evaluated in a two-step process to: (1) determine their eligibility to be included in the OWOW Plan, and (2) to prioritize projects for potential Prop 84 funding based on their merits to address the Watershed goals and objectives.

The objective of this process was to develop a comprehensive and unique watershed-wide plan that transcends a request for Proposition 84, Chapter w funding. The intent was to develop a blueprint for water resources management in the watershed that incorporates all meritorious projects, beyond any specific short-term funding availability.

A total of 297 candidate projects were received from 64 diverse agency sponsors from throughout the Watershed. Project sponsors include water utilities, cities and counties, NGOs, the USDA Forest Service, and private-public partnerships. As shown in the map below, candidate projects are well distributed throughout the watershed (as shown in **Figure 2**).

**Figure 2**      **Project Locations**



During the call for projects, sponsors were encouraged to consider development and collaboration on watershed-wide, integrated projects that would provide multiple benefits to more than one agency or region of the Watershed. As shown on **Figure 3**, nearly 70% of received applications are for projects that provide a benefit for the entire watershed or multiple municipalities and sub-watersheds.

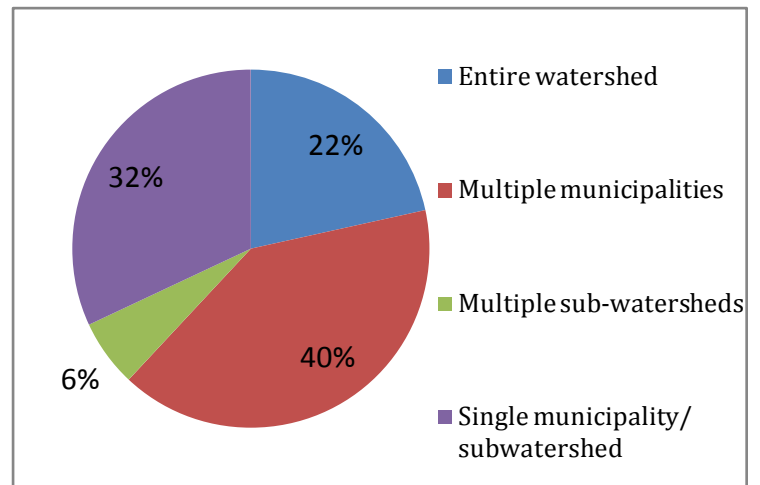


Furthermore, candidate projects provide a variety of benefits, as shown in **Figure 4**. Guaranteeing a sustainable, reliable, drought-proof and equitable water supply is one of the main objectives of the OWOW Plan and of the mandate of many relevant agencies in the Watershed; this results in 60% of candidate projects being related to water supply. Nevertheless, the remaining 40% address water quality, habitat restoration and flood control, and recreational and open space needs of the Watershed (**Figure 4**). Many of the projects also provide more than one type of benefit.

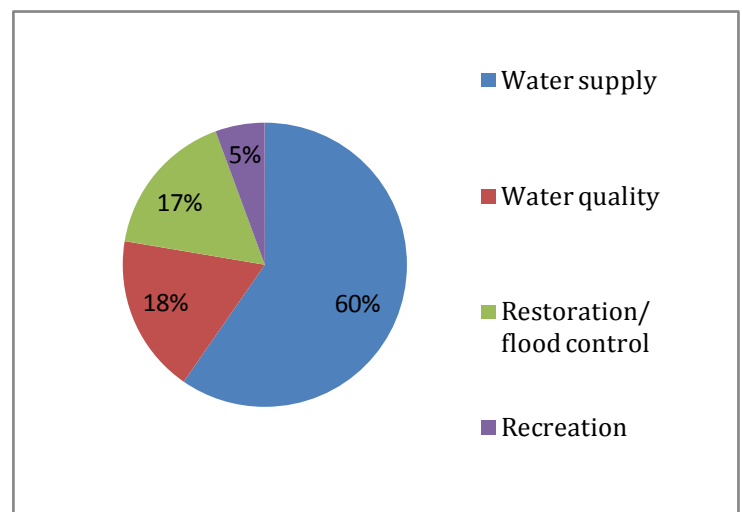
Finally, a significant number of candidate projects will benefit disadvantaged (40%) and Tribal (14%) communities in the Watershed (**Figures 5 & 6**).

Candidate projects have a total cost estimate of \$3,582 million, of which \$1,682 million (47%) is being requested for grant funding under Proposition 84, Chapter 2. The remaining \$1,900 million (53%) will be covered through a combination of local funds (\$1,355 million) and federal contributions and SRF loans (as shown in **Figure 7**). On average, each project is requesting grant funds in the amount of \$5.7 million, although the amount requested varies significantly from \$34,000 to \$100 million. These funding requirements represent a significant challenge for the Watershed.

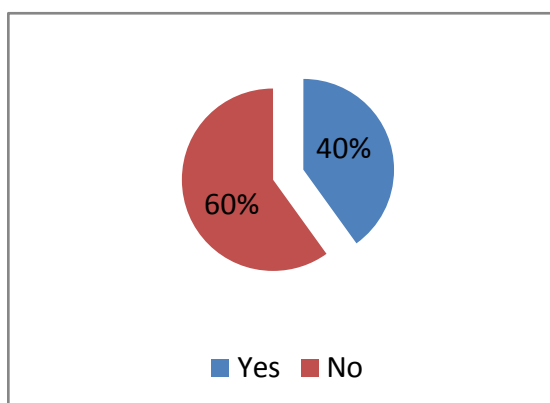
**Figure 3 Project Benefit Split by the Extent of Impact on the Watershed**



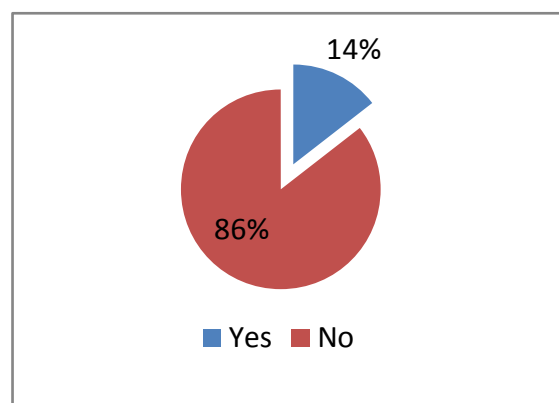
**Figure 4 Watershed Projects by Benefit**



**Figure 5 Projects Benefiting Tribal Communities**



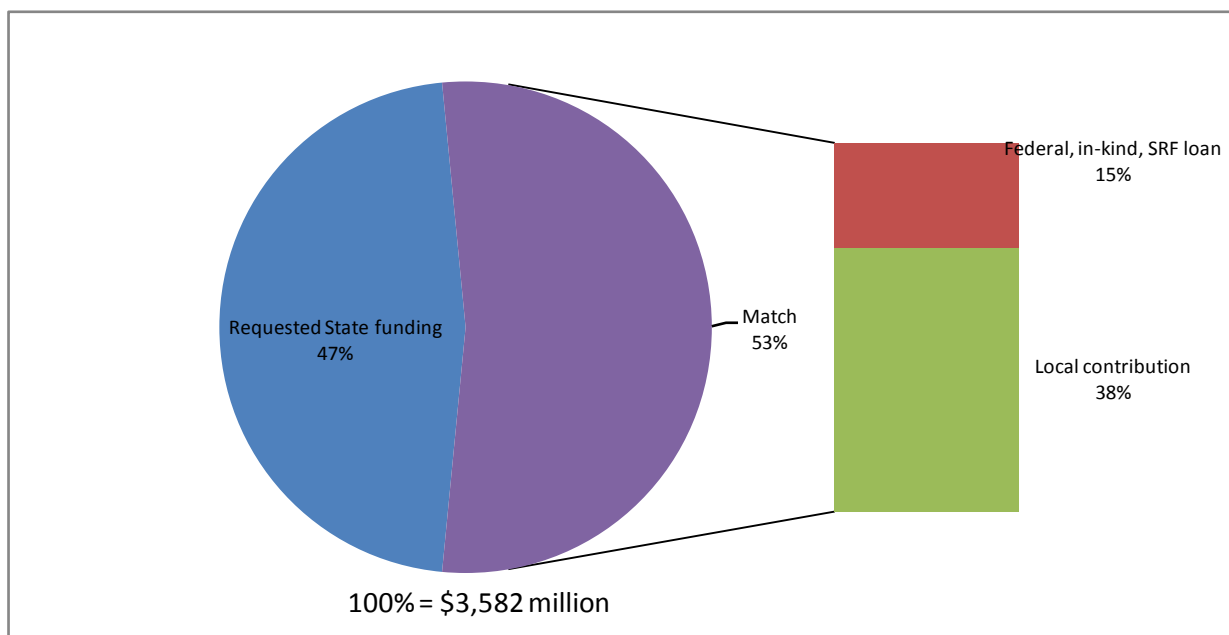
**Figure 6 Projects Benefiting Disadvantaged Communities**



As stated earlier, this planning process transcends specific funding cycles. Projects are included in the OWOW Plan and ranked based on their merit to address the Watershed’s pressing needs, regardless of available funding opportunities at any given time. As funding programs become available, projects included in the OWOW Plan will be selected for funding.

However, it should be noted that any project list is dynamic. Projects are continuously refined and redefined between inception and implementation. The list reflects a response to conditions at a specified date. As the OWOW process encourages further collaboration and the development of multi-benefit, multi-purpose projects, a project list can also serve as a tool to identify new partners or project synergies. To remain viable planning tools and relevant to available funding sources, project lists should be updated regularly. Using the electronic data submission format from the first round of project submittals, it is possible to regularly update project information. With this information, the Steering Committee can track the Watershed’s progress in meeting OWOW goals.

**Figure 7      Funding Structure of Candidate Projects**



## Project Evaluation Process

Submitted project applications were evaluated by SAWPA staff in a transparent manner based on the information provided by the applicant and a pre-established process to determine: (1) their eligibility to be part of the OWOW Plan, and (2) their priority to receive Proposition 84, Chapter 2 funding in the initial expedited round. Under the direction of the Steering Committee, updated or additional information may be requested for subsequent rounds of funding

This two-step process had as an objective the development of a comprehensive watershed plan per DWR guidelines, regardless of which of the projects included in the Plan receive Proposition 84 funding during the current funding cycle. As a result, the Plan will be a blueprint for the improvement of water resources management in the Watershed, and not merely a document for requesting funding. Projects in the Plan not receiving Prop 84 funding at this time will be candidates for future funding opportunities, providing an incentive for project sponsors to participate in the watershed-wide plan.

Projects were selected to be included in the OWOW Plan based on the sponsor's eligibility, being located in the Watershed, and providing at least one of four benefits: water supply, water quality, habitat restoration/flood control, or recreational opportunities.

Candidate projects included in the OWOW Plan were then evaluated and prioritized for Proposition 84, Chapter 2 funding based on the degree to which they comply with Evaluation Criteria developed by SAWPA staff. These Criteria were based on the Goals and Objectives, Strategies and Targets established by the Steering Committee and the Pillars.

After initial screening, highly ranked project proposals were reviewed in detail by an independent technical review panel. The panel considered technical and economic feasibility, OWOW goals and objectives, and relative ranking weights developed by the Steering Committee. This panel was tasked with verifying the data provided by project proponents and ensuring that the numeric ranking tools are applied consistently across projects.

## **Plan Performance and Monitoring**

SAWPA will develop a plan to monitor the implementation of the OWOW Plan and the specific projects included. The monitoring will take place at two levels – plan and project – to:

- Ensure progress is being made toward meeting the objectives of the Plan
- Ensure specific projects identified in the Plan are being implemented as planned in terms of schedule, budget, and technical specifications
- Identify potential necessary modifications to the Plan or to specific projects, in order to more efficiently and effectively accomplish the goals and objectives of the Plan
- Provide transparency and accountability regarding the disbursement and use of funds for project implementation

Program management and project administration will be performed by SAWPA, upon receipt of funding, following a process similar to the one used for projects funded through Proposition 13 and 50. SAWPA will serve as administrator for agreements between State Agencies and SAWPA, as well as program manager for the various programmatic requirements and related activities required through these agreements.

### ***Monitoring at the plan level***

SAWPA, along with the support of stakeholders in the watershed, will evaluate the performance of the OWOW Plan in terms of accomplishing the plan objectives and targets. While objectives are overarching principles guiding water sustainability in the Watershed, targets are more specific and measurable, and can be mapped to specific objectives of the Plan. For this reason, plan performance indicators are aligned to individual targets. Nevertheless, it is important to point out that some targets are difficult to quantify (e.g. Increase resource efficient land use). It is anticipated that plan performance will be evaluated every two years. SAWPA will lead the effort, but active support from many stakeholders in the Watershed will be required to provide data and information, as well as insight.

Results of the bi-annual evaluation will be published by SAWPA in the OWOW webpage, and will include the use of visual tools (i.e. dashboards) to show the progress to date in achieving the plan targets.

### ***Monitoring at the project level***

In addition to monitoring the performance of the OWOW Plan as a whole, the performance of specific projects in the OWOW Plan receiving funding will be evaluated every six months. The evaluation will be led by SAWPA but will require extensive participation for the sponsor of the project in question.

Results of the semi-annual project evaluation will be published by SAWPA in the OWOW webpage, and will include the use of visual tools (i.e. dashboards) to show the progress to date in the implementation of each project.

## **Adaptive Management**

The dynamic nature of projects and plans in the Watershed will result in the need for frequent updates to the OWOW Plan. Since the Plan will be used by agencies in the Watershed to help integrate individual plans and to focus funding opportunities on projects that are most effective and ready to proceed, the information contained in the plan must remain current to be effective.

In recognition of the ever changing aspects of the planning process, the SAWPA will update and refine this Plan every 3 to 5 years. The plan update will take into consideration recent development in the Watershed, such as projects implemented since the last review, and new understanding of the watershed issues. Furthermore, the results of the bi-annual performance review will be used to identify potential modification to the watershed strategy.

As new funding opportunities arise to support the implementation of the remaining water resource projects, SAWPA will continue to pursue these opportunities. With the support of local and State agencies further progress can be made in meeting long term goals of water sustainability for the region and the State.

### *Continued stakeholder involvement and plan success*

Success of this continuous planning process depends on continued stakeholder engagement. The plan will then continue to be watershed-wide, open and transparent, and comprehensive. The Steering Committee and the Pillars will continue to function as representatives of the community at large and provide guidance and insight to the process.

As part of the bi-annual update process, stakeholder conferences will be convened to review progress to date in accomplishing targets and to identify and prioritize remaining gaps, as well as to revisit strategies.

Increased collaboration will lead to the development of more multi-benefit, multi-function projects leading to a new model for managing watershed issues. This new twenty-first century model will create a sustainable watershed, where all residents and the environment enjoy a successful future.